SYSTEM AND METHOD FOR READ SYNCHRONIZATION
OF MEMORY MODULES
ABSTRACT OF THE DISCLOSURE

A memory module includes several memory devices coupled to a memory hub. The memory hub includes several link interfaces coupled to respective processors, several memory controller coupled to respective memory devices, a cross-bar switch coupling any of the link interfaces to any of the memory controllers, a write buffer and read cache for each memory device and a read synchronization module. The read synchronization module includes a write pointer, a read pointer and a buffer. The write pointer is incremented in response to the receipt of read data. The read pointer increments in response to coupling of the read data from the memory hub. A comparator compares the read pointer an the write pointer, and the comparison is used to adjust the memory timing.